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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,790	08/04/2003	Robert A. Roth	DP-309885	6893
22851	7590	04/20/2005	EXAMINER	
DELPHI TECHNOLOGIES, INC.			MILLER, CARL STUART	
M/C 480-410-202			ART UNIT	
PO BOX 5052			PAPER NUMBER	
TROY, MI 48007			3747	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/633,790

Applicant(s)

ROTH ET AL.

Examiner

Carl S. Miller

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 24, 25, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 18-23 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3747

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 12, 13-15 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Powell.

In particular, Figure 1 of Powell teaches all the limitations of these claims. The regulator will only regulate fuel pressure when the pump is acting since the system will be closed from the regulator and no high pressure will come from the pump.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell.

In particular, no output check valve is shown and since there is a check valve (29) that stops reverse flow to the pump, it would have been obvious to not use a check valve at the pump outlet.

Claims 2, 4-8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Rutan.

Powell applies as noted above and Rutan generally teaches the coaxial relief valve structure of the claims including an outer valve which will open when subjected to back-pressure.

It would have been obvious to modify Powell by using the coaxial structure of Rutan to form the valve since Rutan was also used in an engine environment and meets the compact structure called for by Powell.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Oberg.

Powell applies as noted above and Oberg teaches using brass for a check valve used in a fuel environment, thereby making this an obvious material for the check valve of Powell.

Claims 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Miwa.

Powell applies as noted and Miwa teaches a maximum fuel pressure for starting at 400 KPa. This means that the regulator would be set to achieve this as a operating pressure. The 600 KPa pressure would have been obvious in order to protect the system at slightly higher pressures, but not excessively higher pressures. The 20 KPa pressure is an obvious low or minimal pressure, just high enough to avoid cavitation when the pump is just starting.

It would have been obvious to set the valves of Powell at the claimed ranges since one of ordinary skill in the art would have picked such ranges once the maximum operating pressure was is selected.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell and Rutan as applied to claim 8 above, and further in view of Miwa.

Miwa applies as noted above.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Bader.

In particular, Figure 1 teaches the limitations of these claims.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bader.

In particular, elements (22) and (31) include rims that are used to hold the springs in alignment, but it would have been obvious to simply rest the springs directly on the housing and check valve member.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell in view of Briggs.

Powell applies as noted above and Briggs teaches, at Figure 1, a housing containing all of the claimed elements, thereby making such a compact structure obvious for the Powell system.

Claims 18-23 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's arguments filed January 31, 2005 have been fully considered but they are not persuasive. In particular, the examiner apologizes for inadvertently omitting the Powell reference from the Form 892 of the last office action. This, of course, made it

impossible for the applicant to adequately respond to the office action. Thus, this action has been made non-final and the Powell reference has now been made of record on a new Form 892. Finally, the applicant's new drawings have been accepted and cure the problem noted in the last office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl S. Miller whose telephone number is (571)272-4849. The examiner can normally be reached on MTWTHF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen, can be reached at 571-272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

